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(54) Title: SEGMENTED SUPERABRASIVE GRINDING DEVICE

(57) **Abstract:** The present invention is for a grinding device, such as a surface grinding disc or an annular grinding wheel, constructed from a plurality of abrasive segments arranged in an array thereon, wherein the plurality of abrasive segments are embedded in a matrix composition, and wherein the device is adapted to perform a "dry machining" operation. The abrasive segments may be resin bonded or vitrified and may include diamond or other superhard or superabrasive particles, such as, for example, cubic boron nitride ("cBN"), dispersed therein. Both the abrasive segments and the matrix composition include a dry lubricant, such as hexagonal boron nitride, molybdenum disulfide or graphite, dispersed therein. The abrasive segments further include a melt phase metal composition, such as bronze or other copper alloys, to aid in heat dissipation.

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